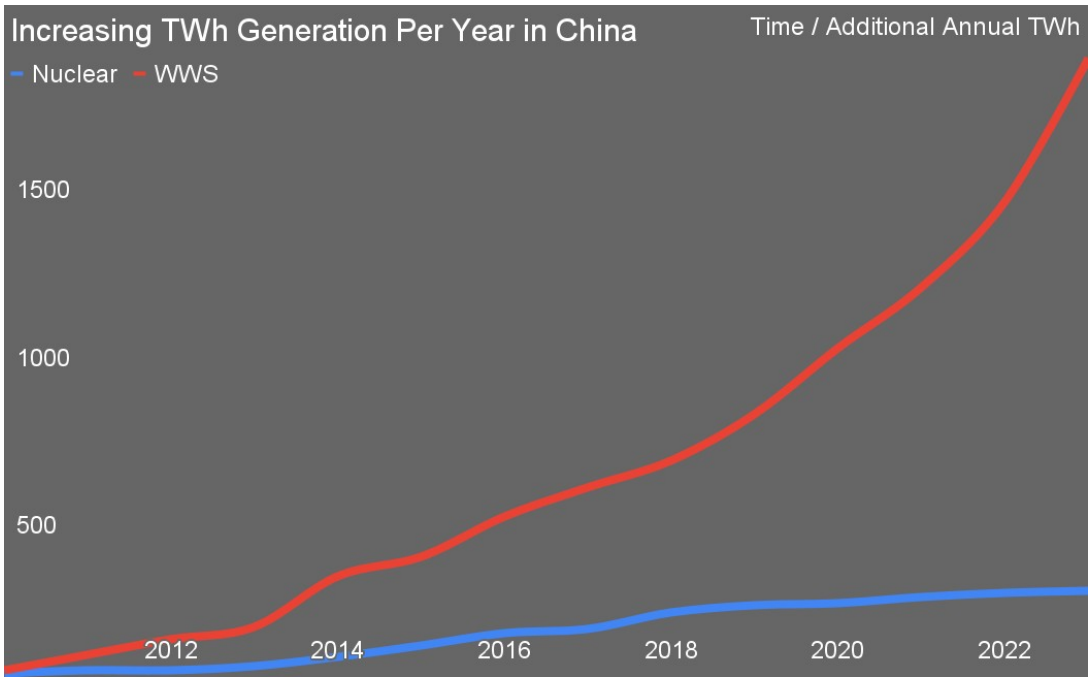
To Chair Lively, Vice Chairs Gamba and Levy, and the House Committee on Climate, Energy, and Environment:

Hello, my name is Max Menchaca and I live in Portland, OR. I have a PhD in atmospheric science from the University of Washington and now work in the tech industry. I strongly urge the committee to **OPPOSE** and **REJECT** HB 4046: this study is a waste of resources (wherever those resources may come from), as investment in nuclear energy in Oregon would be a financial disaster, and furthermore, lock the state in to fall well behind in energy innovation.

This may sound like a surprising statement, as proponents of these bills use the exact same reasoning for support. However, a glance beyond the hype and green-washing towards the actual energy trends and policies around the world show that nuclear energy, like fossil fuels, is an energy source whose time has passed.

First, let's consider China, who generates the 2nd-most amount of energy from nuclear behind the USA. This is a country that in 2011 announced that nuclear energy would be the foundation of their energy mix in the next 10-20 years. However, every subsequent announcement of the country's National Energy Administration has shown that not only are initial targets not being met, they are continually being downgraded – the announcement from September 2023 is of a 10% contribution to their energy grid by 2035. Instead it's renewable energy that has been growing exponentially in China as they continue to meet the demands of their hungry economy.



Or what about France, the country generating the 3rd-most amount of their energy from nuclear? This is a country that made nuclear energy a lynchpin of its own energy portfolio in the latter half of the last century. Emphasis on "last century" – I, at 37 years old, am still younger than all but two operational reactors in France. The most recent one constructed was originally budgeted at $3.3 billion, but crossed the finish line with a bloated budget of $19.1 billion. The country's attempts to get new reactors online is uncertain, as their auditors have not approved targets announced by the Macron government two years ago. France ALSO is having issues with its uranium supply chain. While once able to supply its plants with domestic uranium, the country has been reliant on Niger in recent years (until recent anti-France events there) and Kazakhstan.

Finally, let's consider South Korea, which generates the 5th-most amount of energy from nuclear. The current administration, while more famous for its recent implementation of martial law, is also very pro-nuclear. Feb. 21, just a week and a half ago, the state announced its latest energy mix plans. By 2038, South Korea plans a 37% increase in its current generation of nuclear power… and a **316% increase** in renewables during the same time frame.

All three of these countries have a clear history of making nuclear power an important source of energy, yet all three are signaling in different ways difficulties maintaining existing infrastructure, or de-emphasizing nuclear altogether.

Issues are a feature, not a bug of constructing nuclear facilities. Bent Fylvbjerg, a professor of economic geography at the University of Copenhagen, specializes in researching megaprojects and the economics of them – energy, infrastructure, even the Olympic Games. In his analysis, the projects that most often come in on time and at original budget are wind, solar, and energy transmission. On the other end of the scale? Nuclear. His dataset reports average cost overruns of 238%. In other words, a nuclear project ON AVERAGE is expected to cost well over 3x more than originally budgeted!

I quote from him directly: "...this is purely for economic reasons, many people think this is something ideological, being against nuclear power. It's not even about nuclear waste. That's not even taken into account. This is simply the economics of building nuclear power plants. On that criterion alone, nuclear power is losing out."

Small modular reactors (SMRs) have been empirically demonstrated to NOT solve any of these issues. A recent project in Utah was abandoned due to unexpected rising costs. Even a successfully completed SMR, in Russia, came in a decade past its initial timeline.

Given all of this evidence around the world, what use would another study provide? The basic physics behind nuclear power has hardly changed anytime recently. No matter what proponents of nuclear energy may say, they are missing the point. **Money doesn't lie.**The energy markets all around the world have made clear that nuclear power does not address energy needs. What novel conclusions would another study draw?

I strongly urge the Committee to **reject** HB 4046. Thank you for your attention.